THE TOOL ENGINEER

INDEX

Volume XIX, August 1947 to January 1948

Author Index

Bodner, C. H.—"Master Gaging for the Involute Curve", Dec. p.25
Borg, Vaners—"New Tooling Method Facilitates Aircraft Assemblies", Aug. p.37; "Compressed Air—The Great Equalizer", Jan. p.43
Broaching Tool Institute—"Practical Applications of Involute Splines", Oct. p.47
Conrad, Harry E.—"History Says 'No!' ", Sept. p.17
Dickinson, Thomas A.—"Report on Die Casting", Oct. p.23; "Report on Vacuum Tools", Dec. p.41
Diskavitch, Edward—"Reworking Hardened Tools", Aug. p.46
Dixon, John C.—"Grinding Spur and Helical Gear Teeth", Aug. p.21
Floden, John G.—"The Effect of Cutting Fluids on Drilling Thrust and Torque", Dec. p.21
Freden, Henning—"The Case for Tool Engineering Curriculae", Dec. p.41
Gabriel, Adam—"Proposed Bill on the Units of Length", Jan. p.45
Jansson, Anders—"World's Largest Plating Plant Eliminates All Manual Handling", Aug. p.29; "Cost Cutting with Production Grinders", Sept. p.51; "A 'New' for Production Surface Hardening", Jan. p.47
Klein, A. Albert—"A New Concept in the Field of Abrasives", Nov. p.17
Lambert, Charles E.—"Accurate Drilling Without A Jig", Jan. p.30
Lancaster, J. T.—"The Get-Together of Tool, Jig, and Fixture Design", Oct. p.37
Mawson, Robert—"A Quick-Acting, Positive Drill Jig", Dec. p.36
McDonald, D. E.—"Centering Tool for Milling Cutters", Jan. p.36
Nordquist, Watson N.—"Reviews and Previews", Aug. p.39; "Production Tooling with Carbides", Sept. p.49; "Transfer-Matic Speeds Production", Dec. p.44; "Development of Economical Jig-Grinding", Jan. p.37
Parks, John R.—"Proposed Standard Sheet for Press Forging Dies," Aug. p.43; "Personal Equation of Men and Machines", Oct. p.43
Peirce, W. B.—Editorials: "It Can't Happen Here", Aug. p.1; "Machine Tools, A Vital War Weapon", Sept. p.1; "Always Something Better", Oct. p.1; "Let's Do Something About It", Nov. p.1; "Peace on Earth", Dec. p.1; "We Need Industrial Statesmanship", Jan. p.1
Rideout, Gordon T.—"A New Concept in the Field of Abrasives", Nov. p.17
Rylander, A.E.—"Previews of the Machine Tool Show", Sept. p.21; "Why Sapphire?", Sept. p.45; "Greater Production with Brown & Sharpe Automatics", Oct. p.36; "The Machine Tool Show in Review", Nov. p.24; "Introduction to Plant Layout", Jan. p.17
Sawin, Dr. (Ing.) N. N.—"Wear Tests of Plastics", Dec. p.17
Scrivener Engineering Staff—"Automatic Form Grinding", Aug. p.45
Seavey, Merton W.—"SAE Involute Splines and Applied Involutometry", Part I, Oct. p.17; Part II, Nov. p.43
Seekins, H. L.—"Balancing Supercharger Rotors", Jan. p.25
Skog, Gunnar—"Automatic Welding Speeds Production of Truck Trailer Bodies," Aug. p.47; "Automatic Size Control of Cylinder Bores", Sept. p.53; "The Turbojector—A New Process in Rubber Molding", Oct. p.46
Smith, Hans W.—"Movement Between Work and Locator", Nov. p.41
Stad, Karl—"Bethlehem Steel Expands Facilities", Aug. p.36; "Cam Units Cut Manufacturing Costs, Oct. p.49; "Fabricating Hand Trucks by Welding", Nov. p.42
Thompson, H. T.—"A New Method of Making Electric Connectors", Oct. p.50
Walker, James—"The Techniques of Drawing", Aug. p.31, Oct. p.29, Nov. p.33; "Steels and Lubricants for High Production Dies", Dec. p.29; "Drawing Dies for Magnesium", Jan. p.31
Winkler, James W.—"Tooling Methods for Working Magnesium", Aug. p.17
Winter, Paul H.—"Automatic Feeding Devices", Jan. p.39
Zagar, Frank—"Accurate Broaching of Round Holes", Dec. p.37

Subject Index

A

Abrasives, the New Alpha-Alumina, Nov. p.17
Aircraft assembly, tooling methods, Aug. p.37
Aircraft Materials and Processes (Book), Aug. p.62
Aluminum, Finishes for (Book), Dec. p.64
Anchors, all-purpose plastic expanding screw (Holub), Jan. p.74
Automatics (see *Lathes* or *Screw Machines*)
Automatic cycle machines, Dec. p.44, Jan. p.17
Automatic feeding devices, Jan. p.39
Automotive assembly, roll-over fixture for, Jan. p.29

B

Balancing supercharger rotors, Jan. p.25
Barrel lifter (Merrill Bros.), Jan. p.67
Barrel tilt (Palmer-Shile), Jan. p.69
Battery charger, truck (Westinghouse), Jan. p.68
Bench tools:
  (Also see particular type)
  Bench plate, all-granite (Herman Stone), Oct. p.71
  Hand tapping and threading machine (Farmington), Jan. p.70
  Notcher, Di-Acro (O'Neil-Irwin), Jan. p.79
  Rod parter, Di-Acro (O'Neil-Irwin), Aug. p.70
  Shearing, forming, punching, riveting (Lewis), Aug. p.52
Blueprint Language of the Machine Industries (Book), Aug. p.62
Blueprinting and finishing equipment (Paragon-Revolute), Sept. p.74
Books:
Aircraft Materials and Processes, Aug. p.62
  Applied Industrial Mathematics, Dec. p.64
  The Blueprint Language of the Machine Industries, Aug. p.62
  Chemistry and Technology of Plastics, Aug. p.62
  Experimental Casting Plastics, Aug. p.62
  Finishes for Aluminum, Dec. p.64
  Gasoline Injection Systems, Ex-Cell-O, Jan. p.65
  How to Run a Lathe, Jan. p.65
  Illustrated Jig-Tooling Dictionary, Dec. p.64
  Industries Answeright, Dec. p.64
  Mainspring, Jan. p.65
  Manufacturing Processes, Aug. p.62
  Materials Handbook, Aug. p.62
  Powder Metallurgy, Jan. p.65
  Precision Hole Location, Jan. p.65
  Printed Circuit Techniques, Jan. p.65
  Sixty Years with Men and Machines, Aug. p.62
  Tungsten, Dec. p.64
  Wear and Surface Finish, Jan. p.65
Bores, automatic control of cylinder, Sept. p.53
Bores, micro-honing (Micromatic Hone), Sept. p.76
Boring machines:
  Automotive cylinder (Ex-Cell-O), Sept. p.75
  Dual vertical milling and (W. B. Knight), Dec. p.72
  Jig borer for holes up to 5" (Moore), Sept. p.73
  Multi-way, Borface (Natco), Aug. p.39
  Radial, two-spindle (Moak), Sept. p.72
  Hydraulic, self-contained (Hydro-Borer), Sept. p.78
Boring tools and accessories:
  Head, offset boring (Everede), Nov. p.70
  Tools, standard carbide-tipped (Carboloy), Aug. p.66
  Tools, solid carbide (Carboloy), Nov. p.48
Boring tools, fundamentals of (concluding installment), Aug. p.49
Broaches, standardized keyway (Zagar), Aug. p.68
Broaching:
  machine, Hydraulic 36" (Zagar), Sept. p.72
  of round holes, Dec. p.37
  of splines in hub shells, Multiple (Oilgear), Dec. p. 20
  Standards for broach inserts and holders, Aug. p.42
Buffer, heavy-duty, overhang (Bradford), Nov. p.65
Buffing compound, Hydro-Buff "500" (Hydro-Chemicals), Dec. p.71
Bur, carbide grinding (M. A. Ford), Nov. p.65; (Lincoln Park), Dec. p.70
Bushings, guide pin, low-friction, H.D. (Standard Mach.), Dec. p.73

C

Cam feed units (Natco), Oct. p.49
Carbides:
  Carbide Milling pocket calculator (Super), Dec. p.43
  for boring tools (Carboloy), Nov. p.48
  for machining Ni-Hard castings (Carboloy), Oct. p.45
  Hi-temp cemented carbide K138 (Kennametal), Dec. p.68
  Production tooling with, Sept. p.48
  Rods, cemented carbide (Carboloy), Aug. p.38
  Willey's Metal "606" (Willey's), Aug. p.69
Casting aided by infra-red, Dec. p.39
Casting inspection, by three-dimension method, Aug. p.42
Casting Plastics, Experimental (Book), Aug. p.62
Centering machine, hydromatically operated (Hebert), Jan. p.67
Chemistry and Technology of Plastics (Book), Aug. p.62
Chrome plating plant, automotive, Aug. p.29
Chucks:
  Collet chuck, production 3" (Hall), Nov. p.70
  Collet chuck, small-lathe precision (Universal), Dec. p.75
  Drill chuck, "Air-Grip" (Anker-Holth), Dec. p.70
  Drill chuck key guide (Hinton), Aug. p.69
  Lathe chuck, aluminum body (Whiton), Oct. p.67
  Magnetic chuck, Viking (Rockford Magnetic), Oct. p.45
  Permanent chuck (O. S. Walker), Aug. p.68
  Speed chuck, Multi-duty (Airo), Dec. p.68
Clamps:
  Plunger, heavy duty (Detroit Stamping), Dec. p.71
  Toggle, heavy duty (General Welding), Jan. p.78
  Toggle, portable (Detroit Stamping), Oct. p.68
Collet head, universal dividing (Matco), Oct. p.64
Compressed air, economies of, Jan. p.43
Compressors, oscillating air (Assoc. Engineers), Sept. p.70
Coolants:
  Effect on drilling thrust and torque, Dec. p.21
  Grinding, Wheelyfe "85" (Bee Chemical), Aug. p.65
  Machining, Lusol liquid concentrate (Anderson Oil), Oct. p.65
Coolant strainer (Gadget), Aug. p.52
Coolant temperature control unit (Niagara Blower), Jan. p.70
Copper plating plant, automotive, Aug. p.29
Couplings, flexible (Gear Grinding), Dec. p.73
Cupping operations in drawing of metal, Aug. p.31
Cut-off machine, hydraulic (Racine Tool & Mfg.), Jan. p.67
Cutting fluids:
  Additives (Lubricants, Inc.), Dec. p.69
  Effect on drilling thrust and torque, Dec. p.21
Cutting machines, single purpose and production (Racine), Oct. p.66
Cylinders, air, dual cushion (Hy-Matic), Nov. p.67
Cylinders, air, variable stroke (Anker-Holth), Oct. p.67
Cylindrical grinding-indexing attachment (Brown & Sharpe), Aug. p.44

D

Die casting hot and cold chamber methods, Oct. p.23
Die casting machines, heavy-duty hydraulic (Harvill), Sept. p.70
Die sinker, automatic (Pratt & Whitney), Dec. p.69
Diemaker's tryout and assembly machine (Moore), Nov. p.65
Dies:
  (Also see *Drawing Die Problems and Formulae*)
  Die sets, all-steel (Standard), Aug. p.64
  for press forging, Aug. p.43
  Pillar post die units (Grunow), Aug. p.71
  Progressive die for making electric connectors, Oct. p.50
  Square and hex-shaped, wire drawing (Carboloy), Aug. p.64
Drafting aids and calculators:
  Carbide milling pocket calculator (Super Tool), Dec. p.43
  Deci, Log slide rule (Pickett & Eckel), Nov. p.71
  Drawing parallel lines (Gadget), Dec. p.45
  Erasing tool, electric (Charles Bruning), Dec. p.68
  Metal gauge comparator chart (Twin "K"), Jan. p.35
  Templets, fixture-design indicator (B. C. Ames), Oct. p.35
  Tracing vellum, doubletone (Craftint), Sept. p.73
  Tray for instruments and other tools (Wayne), Aug. p.64
Drawing Die Problems and Formulae (a series):
  Drawing dies for magnesium, Jan. p.31
  Steels and lubricants for high production dies, Dec. p.29
  Techniques of drawing, Aug. p.31; Oct. p.29; Nov. p.33
Dresser, diamond wheel (Diamond-Detroit), Nov. p.64
Dresser, radius and angle wheel (Matco), Oct. p.66
Dresser, radius emerywheel (Montgomery), Dec. p.66
Dresser, Tru-Matic wheel (Erickson), Oct. p.65
Drill press conversion to metal turning (Milholland), Dec. p.73
Drilling and boring tools, fundamentals of, Aug. p.49
Drilling machines:
  Air drill, high speed, small dia. (Aro Equip.), Nov. p.65
  Automatic special-purpose (Snyder), Sept. p.73
  Multi-spindle (Natco), Aug. p.39
  Multi-spindle special-purpose (Stanax-Campbell), Sept. p.47
  Portable drills, Chief (Chicago Precision Mach.), Aug. p.70
  Rock drill, Utility Jackhammer (Ingersoll-Rand), Dec. p.70
Drilling masonry, emergency, Aug. p.52
Drilling thrust and torque affected by cutting fluids, Dec. p.21
Drilling tools and accessories:
  Drill, Di-Met diamond abrasive core (Felker), Aug. p.66
  Drill heads, Multi and adjustable spindle (U. S. Drill Head), Aug. p.67
  Lubricating pump for tapping machines (Procunier), Sept. p.71
  Reamers, carbide-tipped flute-long (Super Tool), Aug. p.64
  Speeder, drill (Dumore), Aug. p. 69
  Taps, M-11 nib-type hollow-shank (Detroit Tap), Aug. p.71
  Work holder, safety (Universal Vise & Tool), Jan. p.70
Drilling without a jig, precision, Jan. p.30
Drives, feed-traverse, packaged unit (General Electric), Oct. p.64
Dust collector, industrial (Pulverizing Mach.), Dec. p.73
Dynamic balancing of supercharger rotors, Jan. p.25

E

Education, employee (General Electric), Aug. p.20
Education: tool engineering curriculae, Dec. p.40
Electrical Circuits, Printed (Book), Jan. p.65
Electrical equipment:
  Cords, neoprene-covered electrical (U.S.Rubber), Oct. p.22
  Panelboard, NTPS (Federal Electric), Aug. p.63
  Pigtails made by new method, Oct. p.50
  Rectifier, electronic (Weltronic), Dec. p.68
  Solenoid, All-welded, small (General Electric), Dec. p.70
Electro-plating plant, automotive, Aug. p.29
Engines, differential air (Nat'l Pneumatic), Oct. p.69

F

Feeding attachment for centerless lapping machines, Jan. p.72
Feeding devices, automatic, Jan. p.39
Finishing, metal:
  Anti-corrosive, Co-Polymer P-5 (Watson-Standard), Dec. p.35
  Finishes for Aluminum (Book), Dec. p. 64
  Spray gun, production (Binks), Jan. p.67
  Sprayer, low-temp alloy (K.&F. Metal Spray), Nov. p.64
  Wear and Surface Finish (Book), Jan. p.65
Fittings, Everseal self-flaring (Everhot), Aug. p.64
Fixtures (See *Jigs and Fixtures*)
Flame hardening in production, Jan. p.47
Forging dies, press, Aug. p.43
Fuel Injection Systems Manual, Ex-Cell-O (Book), Jan. p.65
Fuel injection test equipment (Ferrier), Dec. p.67
Furnaces, bench-type oven (Eclipse Fuel Eng'g), Oct. p.65
Furnaces, high-vacuum (Eitel-McCullough, Inc.), Aug. p.70

G

Gage blocks:
  employing tungsten-carbide guards (Ford-Johansson), Oct. p.49
  Lifetime-carbide (Fonda), Aug. p.65
  Microgages (Van Keuren), Aug. p.69; Dec. p.70
Gages and measuring instruments:
  Abraser accessories (Taber), Aug. p.70
  Comparator, with interchangeable parts (Stand. Gage), Jan. p.78
  Contour gages, Electrolimit (Pratt & Whitney), Aug. p.66
  Electric gage head (Yankee Precision Prod.), Aug. p.63
  Electronic measuring equipment (Brown & Sharpe), Dec. p.74
  Multi-chek, Airlectric (Sheffield), Aug. p.71
  Plug Gage, Norbide reversible (Size Control), Aug. p.66
  Pneumatic (Merz Eng'g), Aug. p.63
  Selector, Automatic roll (Sheffield), Aug. p.67
  Selector, Automatic small parts (DoAll), Sept. p.72
  Thread gage handles, flexible collet (Lincoln Park), Dec. p.71
  Torque measuring device (Airdraulics), Aug. p.63
Gear teeth, grinding of spur and helical, Aug. p.21
Gear tester, Parkson 9" (Geo. Scherr), Jan. p.75
Grinders:
  Abrasive belt (Hill Acme), Sept. p.70
  Abrasive belt (Porter-Cable), Sept. p.76
  Abrasive belt cylindrical grinder-polisher (Hammond), Dec. p.66
  Carbide tool (Baldor), Sept. p.77
  Cutter and tool (Brown & Sharpe), Jan. p.74
  Form, automatic centerless (Scrivener), Aug. p.45
  for spring clutch teeth (Cross), Sept. p.74
  Hydraulic external and internal (Grenby), Sept. p.75
  Hydraulic vertical spindle (Besley), Dec. p.69
  Internal, automattic (Bryant), Aug. p.41
  Profile, internal or exterior (Milwaukee Chaplet), Sept. p.78
  Offhand or freehand (Corlett-Turner), Oct. p.66
  Projectoform, optical amplification (Sheffield), Oct. p.70
  Tap (Henry P. Boggis), Nov. p.67
  Three-wheel (Le Maire), Aug. p.64
  Valve-seat, Automatic (Fitchburg), Jan. p.71
  Vertical stroke (Walker), Sept. p.71
Grinding abrasive, Alpha-Alumina, Nov. p.17
Grinding accessories:
  "Cool Grinding" cooling unit (DoAll), Jan. p.77
  Cylindrical grinding and indexing (Brown & Sharpe), Aug. p.41
  for precision external grinding (So. Bend), Aug. p.65
  Fixture, simple grinding (Gadget), Dec. p.45
  Fixture, universal work holding (K. O. Lee), Oct. p.66
  Motor for internal grinding of small holes (Bryant), Jan. p.29
  Thread grinding attachment (Tinker's), Jan. p.68
Grinding bur, carbide (M. A. Ford), Nov. p.65
Grinding coolant, Wheelyfe "85" (Bee Chemical), Aug. p.65
Grinding, economical jig, Jan. p.37
Grinding, production, Sept. p.51
Grinding spur and helical gear teeth, Aug. p.21

H

Hardened surfaces, machining of, Aug. p.46
Hardening, surface, by "Flamatic", Jan. p.47
Hardness testers, Tukon (Wilson Mech. Inst.), Aug. p.63
History of machine tool industry, Sept. p.17
Hole Location, Precision (Book), Jan. p.65
Hole locator, precision (DoAll), Aug. p.66
Hole punching and notching units (Wales-Strippit), Nov. p.33

I

Induction heating unit, bench, 750-watt (Tocco), Aug. p.65
Induction heating conveyor belt table (Lepel), Aug. p.65
Infra-red aids in precision casting, Dec. p.39
Inhibitive, corrosive, Steelyfe (Bee Chemical), Dec. p.68
Inspection of castings, three-dimensional, Aug. p.42
Instruments (See *Gages and measuring instruments*)
Involute curve, master gaging for, Dec. p.25
Involute splines and involutometry, Nov. p.43, Oct. p.17
Involute splines, practical applications of, Oct. p.47

J

Jigs and fixtures and components:
  Angle plate, compound (Angle Computer), Nov. p.68
  Clamp, quick-acting (Jig-Nut), Nov. p.73
  Dowel pins (E. A. Baumbach), Aug. p.68
  Fixture, double-cam-actuated (Williams), Aug. p.71
  Fixture, grinding, simple (Gadget), Dec. p.45
  Fixture, grinding, universal (K. O. Lee), Oct. p.66
  Fixture, milling, air-operated (Erickson), Dec. p.69
  Fixture, milling, versatile (Mfr's Eng'g Serv), Aug. p.71
  Fixture for assembly, roll-over, Jan. p.29
  Jig and fixture unit (Rapid-Titan), Aug. p.69
  Jig, drill, for hex tube (Gadget), Jan. p.42
  Jig, drill, positive quick-acting, Dec. p.36
  Jig eliminated in accurate drilling, Jan. p.30
  Jig, superior speed (Superior Sales & Eng'g), Aug. p.67
  Vise and angle plate, combination (Gale Forssen), Aug. p.67
  Vise, 3" swivel base (L-W Chuck Co.), Dec. p.73
  Vise, universal angle swivel (Union Tool), Jan. p.75
  Work holder, safety, drill presses (Universal Vise & Tool), Jan. p.70
Jig grinding, economical, Jan. p.37
Jig-Tooling Dictionary, Illustrated (Book), Dec. p.64

L

Lathe, How to Run a (Book), Jan. p.65
Lathes:
  Bench, 18" (Logan), Sept. p.72
  Bench, 10" quick-change (Atlas Press), Nov. p.69
  Rubber roller polishing and metal turning (Le Blond), Dec. p.72
  Toolroom, S-56, with zero precision bearings (Sheldon), Sept. p.74
  Toolroom, 32-speed, 60-feed (Sidney), Jan. p.68
  Toolroom, 300-speed, 16" (Le Blond), Jan. p.69
Lathe tools and accessories:
  Air-Tracer for irregular contours, Aug. p.40
  Cross-slide attachment, independent (E. W. Bliss), Dec. p.66
  Driver and counterbore combination (Continental), Dec. p.67
  Grooving tool, V-pulley, carbide-tipped (Wendt-Sonis), Dec. p.72
  Metal turning converter (Milholland), Dec. p.73
  Radius-turning tool (General Electric), Dec. p.45
  Ratio recessing tool (Maxwell), Oct. p.70
  Steady rest, self-aligning, Jan. p.42
  Tap holder, releasing, hand lathe (Hook & Miller), Dec. p.67
  Tool post turret (Enco), Aug. p.64
  Turret attachment, taper-boring (Artesan), Dec. p.72
Lathe work on irregular contours, Aug. p.40
Locator, calculating movement between work and, Nov. p.41
Lubricants for high production dies, Dec. p.29
Lubricants for working non-ferrous sheet metal (Glyco Products), Jan. p.71

Index for Volume XVIII will follow in an early number of The Tool Engineer

M

Machine tool Builders' Show, Previews, Sept. p.21; Reviews, Nov. p.24
Magnesium drawing dies for, Jan. p.31
Magnesium tooling methods for working, Aug. p.17
Manufacturing Processes (Book), Aug. p.62
Masonry drill, emergency, Aug. p.52
Materials Handbook (Book), Aug. p.62
Materials handling equipment and plant layout, Jan. p.17
Materials handling equipment: Automatic feeding devices, Jan. p.39
Materials handling equipment:
- Barrel lifter (Merrill Bros.), Jan. p.67
- Conveyor, aluminum gravity (Rapids-Standard), Jan. p.72
- Conveyor, aluminum prefab belt (Patron Trans.), Jan. p.73
- Conveyor, double-flex (Island Equip.), Nov. p.66
- Conveyor, portable power belt (Rapids-Standard), Sept. p.73
- Conveyor unbalanced load vibrator (Hapman Conveyor), Jan. p.69
- Drum and barrel tilt (Palmer-Shile), Jan. p.69
- Elevating table, 1-ton, portable (Montgomery), Jan. p.67
- Flight, rubber (Hapman Conveyor), Jan. p.69
- Fork truck, sturdy, lightweight (Baker-Rauling), Jan. p.71
- Hand trucks fabricated by welding, Nov. p.42
- Lifting truck, extra-height (Automatic Transp.), Jan. p.68
- Shoplifter, "Economy" (Economy), Sept. p.71
- Table, hydraulic lift tilting (Lyon-Raymond), Dec. p.73
- Table, sheet feeding (Lyon-Raymond), Nov. p.69
- Table, strip and sheet feeding (Lyon-Raymond), Oct. p.65
- Tiltable (Lyon-Raymond), Oct. p.65
- Truck battery charger (Westinghouse), Jan. p.68

Mathematics, Applied Industrial (Book), Dec. p.64
Mathematics: *Industries Answeright* (Book), Dec. p.64
Measuring length, standards for, Jan. p.45
Metal gauge comparator chart, Jan. p.35
Metric standardization, Jan. p.45
Micrometer, duplex internal and external (Richards), Aug. p.67
Microscope, locating (Moore), Oct. p.68
Milling machines:
- Bench-type, powerful (Diamond), Dec. p.67
- Bench, three-dimensional (Philbro), Aug. p.69
- Conrod balancer, automatic (Snyder), Dec. p.66
- Dual vertical miller and boring machine (W. B. Knight), Dec. p.72
- Milling adapting unit, horizontal (Malnar), Jan. p.76
- Ram-type (Van Norman), Oct. p.64

Milling machine accessories:
- Axial face Kennamill for cast iron (Kennamill), Dec. p.68
- Cutter, bi-axial carbide-tipped (Super Tool), Aug. p.68
- Cutter, carbide-tipped (H. T. Howald), Jan. p.71
- Cutter centering tool, improvised, Jan. p.36
- Work table, universal auxiliary (Malnar), Jan. p.76

Mills, micro, cemented carbide (Severance), Nov. p.72
Molding alloy for casting plastics, rubber, and other (Trethaway), Aug. p.28
Motor, air-control, heavy-duty (Bellows), Oct. p.71
Motor, induction, adj-speed, Tri-Clad (Gen. Electric), Nov. p.69
Motor, hydraulic, rugged, compact (Gerotor May), Dec. p.75
Motor for internal grinding of small-dia. holes (Bryant), Jan. p.29

N

Nickel plating plant, automotive, Aug. p.29
Ni-Hard castings machined with carbides, Oct. p.45

O

Optical projection in master gaging for involute curve, Dec. p.25

P

Parallel lines, drawing (Gadget), Dec. p.45
Personal equation in quality control, Oct. p.43
Plant layout, introduction to, Jan. p.17
Plastics, Chemistry and Technology of (Book), Aug. p.62
Plastics, Experimental Casting (Book), Aug. p.62
Plastics, wear tests of, Dec. p.17
Pneumatic tools in the small shop, Jan. p.43
Points, abrasive mounted (Norton), Aug. p.69
Powder Metallurgy (Book), Jan. p.65
Power feed hydraulic, for drill presses (Canedy Otto), Dec. p.70
Power units hydraulic (Ex-Cell-O), Oct. p.67
Power units, hydraulic (Hufford), Nov. p.71
Press forging dies, Aug. p.43
Press tonnages, calculation of, Oct. p.34
Press units, hole punching and notching (Wales-Strippit), Nov. p.32
Presses:
- Air-hydraulic, Hapco (Hy-Air Products), Sept. p.75
- Bench, air-arbor (Air-Trol), Aug. p.70, Nov. p.66
- Bench, air-hydraulic, for light work (Bryant Products), Nov. p.64
- Brake, largest (Warren City), Dec. p.39
- Brake, power, 120-ton (Columbia), Sept. p.74
- Briquetting, 345-ton (E. W. Bliss), Sept. p.76
- Hydraulic, 1500-ton straight side (Verson), Nov. p.73
- Punch, back-geared 31-ton (Diamond), Sept. p.72
- Punch, open-backed (Diamond), Dec. p.71
- Punch, stock feed, hydraulic (Haller), Jan. p.73
- Punch, 10-ton hi-speed automatic (Di Machine) Sept. p.77
- Straight-sided, 60 to 250-ton (Clearing), Sept. p.73

Processes, Manufacturing (Book), Aug. p.62
Printed Circuit Techniques (Book), Jan. p.65
Pumps:
- Coolant, gusher (Ruthman), Dec. p.72
- Circulating, and motor unit (Ruthman), Oct. p.68
- Hydraulic, 4-piston, lightweight (Miller), Dec. p.71
- Hydraulic, steady-flow (Gerotor May), Dec. p.67
- Hydraulic foot, lightweight (Lyon-Raymond), Dec. p.68
- Hydraulic gear (Aro Equipment), Dec. p.73

Punch and die units, self-stripping (Raar), Aug. p.63

Q

Quality control, personal equation in, Oct. p.43

R

Riveter, air-flex double-end (Lemert), Dec. p.69
Riveter, pneumatic interchangeable-head (Schlack), Sept. p.78
Rolling tissue-thin metal, Aug. p.52
Rotary table, single-unit (W. B. Knight), Aug. p.65
Rotary table, two-way sliding (Leo G Brown Eng'g), Aug. p.65
Rotors, balancing supercharger, Jan. p.25
Rubber molding by injection method, Oct. p.46

S

Safety headgear (Gadget), Aug. p.52
Sapphire, industrial, and its applications, Sept. p.45
Saw, band, horizontal (Wells), Sept. p.74
Saw, band, horizontal wet-model (Johnson), Oct. p.67
Screw driver, power, Trutorq (Airdraulics), Jan. p.69
Screw machine accessories:
- Holder, adjustable floating (Erickson Tools), Aug. p.70
- Revolving stop (Boyar-Schultz), Aug. p.66
- Tap holder, releasing (Hook & Miller), Dec. p.67
- Tap holder, floating pull-out (Burg), Jan. p.68

Screw machines, automatic, 24" (Standard), Dec. p.68
Screw machines, greater production with, Oct. p.36
Sediment remover, settling tank (Honan-Crane), Oct. p.66
Shaper, back-geared 12" (Sheldon), Nov. p.66
Shaper, multi-purpose (Gemco), Sept. p.75
Shears, squaring (Columbia), Oct. p.65
Size control of cylinder bores, automatic, Sept. p.53
Solder feeding attachment (Nelpin), Dec. p.66
Speed and feed selector (Republic Steel), Aug. p.52
Speed reducers, fan-cooled (Cone-Drive), Nov. p.65
Spray gun, production (Bink), Jan. p.67
Sprayer, low-temp alloy (K. & F. Metal Spray), Nov. p.64
Steels:
- for high production dies, Dec. p.29
- Ground flat stock (L. S. Starrett), Aug. p.20
- High impact strength (Latrobe), Sept. p.20
- High speed, plated with tungsten, Jan. p.36
- Matched tool (Carpenter), Oct. p.48
- Production expansion (Bethlehem), Aug. p.37
- Tool, balanced alloy (Amalgamated), Jan. p.78

Stone drill, emergency, Aug. p.52
Strainer for coolants (Gadget), Aug. p.52
Strip mills, miniature Sendzimir, for rolling Hiperco, Sept. p.52
Supercharger rotors, balancing, Jan. p.25
Surface hardening by Flamatic method, Jan. p.47
Switches, monitor (W. C. Dillon), Oct. p.67
Switches, pressure operated (Meletron), Dec. p.67

T

Tables, machine tool work:
- Feed, dial (A. K. Allen), Aug. p.69
- Rotary, single-unit (W. B. Knight), Aug. p.65
- Rotary, small work (H. P. Preis), Aug. p.67
- Rotary, two-way sliding (Leo G Brown Eng'g), Aug. p.65

Tapping machine, high speed (Cleveland Tapping), Dec. p.69
Tensile strength computor (W. C. Dillon), Sept. p.20
Thermal expansion, compensating for, Aug. p.37
Thread compound, high-temp (Felt Products), Dec. p.73
Thread grinder attachment (Tinker's), Jan. p.68
Threading lead tester, electro-mechanical (Pratt & Whitney), Aug. p.71
Threading on close centers, external, Oct. p.50
Thrust and torque affected by cutting fluids, Dec. p.21
Torque measuring device (Airdraulics), Aug. p.63
Transmission belt, rubber, toothed (U. S. Rubber), Jan. p.73
Transmission clutch and brake unit (Drive-All), Oct. p.65
Transmission, hydraulic, variable-speed (Oilgear), Oct. p.67
Transmission, hydraulic, variable-speed (Portman), Nov. p.67
Transmission, hydraulic, variable-speed (Vickers), Dec. p.71
Transmission, 10-30 H.P. at low RPM (Drive-All), Oct. p.65
Truck trailer bodies welded in production, Aug. p.47
Tungsten (Book), Dec. p.64
Tungsten plated to high speed steel, Jan. p.36
Turning and threading machine, two-way opposed (Baker), Aug. p.40
Turret machines (see *Lathes*)

V

Vacuum tools, a report on, Dec. p.41
Valves:
- Air, 4-way (Knox), Dec. p.66
- Air, 4-way solenoid (Crescent Valve), Nov. p.65
- Air control, (Logansport), Oct. p.68
- Air control, poppet-type (Ross), Oct. p.69
- Packless, push-button, brass (Henry), Oct. p.66
- Throttling type, unloading (Air Assoc.), Aug. p.64

W

Wear and Surface Finish (Book), Jan. p.65
Wear tests of plastics, Dec. p.17
Welder, arc, high-speed D-C (General Electric), Oct. p.69
Welder, bench-type, spot and projection (Federal), Nov. p.72
Welder, portable screw feed (J. A. Campbell), Jan. p.72
Welding accessories:
- Flux for joining aluminum with dissimilar metals (All-State), Dec. p.73
- Rod, low-temp (All-State), Aug. p.67
- Rod, low-temp for alloy steels (Eutectic), Oct. p.70
- Water control, automatic (Weltronic), Dec. p.75

Welding in fabrication of hand trucks, Nov. p.42
Welding in production of truck trailer bodies, Aug. p.47
Wheels, industrial, aluminum alloy (Aerol), Dec. p.72